

SIGNIFICANT PERMIT REVISION DESCRIPTION

Nestle Purina PetCare Company, the Permittee, operates its Flagstaff pet food manufacturing plant under Air Quality Class II Permit No. 1001585. The current permit only allows for the combustion of natural gas or low sulfur residual fuel oil (containing less than 0.9% sulfur by weight) in the two boilers, EP-10 and 11. Due to supply insufficiency of low sulfur residual fuel oil, the Permittee applied for a fuel oil variance to include the use of high sulfur residual oil. This permit revision incorporates the variance by authorizing the Permittee to burn high sulfur residual oil that contains sulfur up to 1.2% by weight. The source has demonstrated to the satisfaction of the Director that sufficient quantities of low sulfur oil may periodically be unavailable for use. Dispersion modeling was performed to assess ambient air quality impacts from the use of high sulfur residual oil, and the modeling results show that the sulfur dioxide ambient air quality standards will not be violated. In addition, the permit revision authorizes burning of “on-specification” used oil in the two boilers.

ADDENDUM (SIGNIFICANT REVISION) NO. 35118 TO AIR QUALITY PERMIT NO. 1001585 for Nestle Purina PetCare Company

This Addendum amends Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, by removing Subsection II.C (Operational Limitations) and expanding Subsection II.B (Sulfur Dioxide) to include high sulfur oil usage provisions and boiler operational limitations. Other minor changes are also made to Sections I, II and IV of Attachment “B”. In addition to the terms and conditions of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, the Permittee shall be compliant with the terms and conditions required in this addendum.

Section I, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327 is hereby amended by inserting additional definitions, namely Conditions C, D, E and F, to read as follows:

I. GENERAL REQUIREMENTS

- C. The term “fuel oil” used herein shall refer to distillate fuel oil, residual fuel oil, “on-specification” used oil, or blends of distillate fuel oil, residual fuel oil and “on-specification” used oil. [A.A.C. R18-2-306.A.11]
- D. The term “high sulfur oil” used herein shall refer to fuel oil containing 0.90% or more by weight of sulfur. [A.A.C. R18-2-701.14]
- E. The term “low sulfur oil” used herein shall refer to fuel oil containing less than 0.90% by weight of sulfur. [A.A.C. R18-2-701.16]
- F. The term “on-specification” used oil used herein shall refer to the used oil that meets the following conditions: [A.A.C. R18-2-306.A.2]
 - (1) The used oil must be analyzed and certified by the marketer (oil supplier) to be “on specification” according to the definition in A.R.S. §49-801;

- (2) The flash point shall be at least 100°F; and
- (3) The contaminants must not exceed the following levels (in parts per million by weight):

| | |
|----------|---------|
| Arsenic | 5 ppm |
| Cadmium | 2 ppm |
| Chromium | 10 ppm |
| Lead | 100 ppm |
| PCBs | 2 ppm |

Condition II.A.1.b, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, is hereby amended to read as follows:

- b. The Permittee shall not cause, allow or permit to be emitted into the atmosphere any plume or effluent from the boilers’ operation, the opacity of which exceeds 15 percent, measured in accordance with EPA Reference Method 9. [A.A.C. R18-2-724.J]

Condition II.A.2, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, is hereby amended by adding Condition II.A.2.d to read as follows:

- d. The Permittee shall maintain records of fuel supplier certifications which verify the lower heating value of the fuel being fired in the boilers. [A.A.C. R18-2-306.A.3.c]

Subsection II.B, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, is hereby amended to read as follows:

B. Sulfur Dioxide

1. Emissions Limitations

- a. When low sulfur oil is fired in the affected boilers, the following limits shall be met:

- (1) The Permittee shall not cause, allow or permit emissions of more than 1.0 pounds of sulfur dioxide per million Btu heat input from each boiler. [A.A.C.R18-2-724.E]
- (2) The Permittee shall not emit more than 0.141 lbs of sulfur dioxide per gallon of low sulfur oil fired in each boiler. [A.A.C. R18-2-306.01.A and 331.A.3.a]
[This is a material permit condition]

- b. When high sulfur oil is fired in the affected boilers, the following limits shall be met:

- (1) The Permittee shall not cause, allow or permit emissions of more than 2.2 pounds of sulfur dioxide per million Btu heat input from each boiler. [A.A.C.R18-2-724.F]
- (2) The Permittee shall not emit more than 0.189 lbs of sulfur dioxide per gallon of high sulfur oil fired in each boiler. [A.A.C. R18-2-306.01.A and 331.A.3.a]
[This is a material permit condition]

2. Hour Limitations

When firing fuel oil, simultaneous operation of the affected boilers by the Permittee shall not exceed 2,065 hours in any rolling 12-month period.

[A.A.C. R18-2 -306.01.A and 331.A.3.a]

[This is a material permit condition]

3. Fuel Limitations

a. The Permittee shall only burn fuel oil or natural gas in the boilers. [A.A.C. R18-2 -306.01.A]

b. The Permittee shall not burn fuel oil and natural gas in two boilers combined in any rolling 12-month period in excess of the amounts expressed in the following equation:

[A.A.C. R18-2 -306.01.A and 331.A.3.a]

[This is a material permit condition]

$$\frac{159 \times S \times FO + 0.6 \times NG}{2000} \leq 99 \text{ tons of sulfur dioxide per year}$$

Where

S = Weighted average sulfur content in weight % of all fuel oil used during the preceding 12-month period multiplied by 100

FO = Total fuel oil usage for both boilers during the preceding 12-month period in 1000s of gallons

NG = Total natural gas usage for both boilers during the preceding 12-month period in million cubic feet (Mmcf)

c. The Permittee shall not burn high sulfur oil except the following: [A.A.C. R18-2-724.G]

(1) The Permittee may burn high sulfur oil only when the conditions justifying such use exist. [A.A.C. R18-2-724.G.1]

(2) The sulfur content of high sulfur oil in use shall not exceed 1.2 weight %.

[A.A.C. R18-2 -306.01.A and 331.A.3.a]

[This is a material permit condition]

(3) Throughout the period when high sulfur oil is being burned, the Permittee shall implement the following procedures, demonstrating to the satisfaction of the Director that the conditions justifying use of high sulfur oil continue to exist:

[A.A.C. R18-2-724.G.2]

(a) The Permittee shall conduct monthly market surveys of various fuel oil suppliers for availability of low sulfur oil.

(b) The supplier pool for the monthly market surveys shall include at a minimum, the following refineries:

Kern Oil - Bakersfield, CA

Giant Industries (Ciniza Facility) - Gallup, NM

Foreland Refining Corp - Duckwater, NV

Western Refining - El Paso, TX

Tesoro Petroleum - Salt Lake City, UT

- (c) The Permittee shall conduct semiannual surveys of the following refineries to determine if they produce low sulfur oil. Those refineries that are determined to have begun to produce low sulfur oil shall be added to the monthly survey list described in Condition (b) above.

Chevron USA - El Segundo, CA
Edgington Oil Co. - CA
Exxon Mobil - Torrence, CA
Paramount Petro Corp - Paramount, CA
Phillips 66 - Wilmington, CA
San Joaquin Refining - Bakersfield, CA
Shell Oil Equilon Enterprises - Bakersfield, CA
Navajo Refining Co. - Artesia, NM
Amoco Petroleum - Salt Lake City, UT
Phillips 66 - Woods Cross, UT
Silver Eagle/Inland Refining - Woods Cross, UT

- (d) The Permittee shall submit monthly reports of the market surveys to the Director, disclosing the market status for availability of low sulfur oil and detailing its efforts to obtain the low sulfur oil.
- (3) When the conditions justifying use of high sulfur oil no longer exist, the Permittee shall immediately switch to the use of low sulfur oil and notify the Director in writing of the date and time such fuel switch took place. [A.A.C. R18-2-724.G.3]
- (4) Nothing in this Subsection shall be construed as allowing the use of a supplementary control system or other form of dispersion technology. [A.A.C. R18-2-724.G.4]

4. Monitoring, Recordkeeping and Reporting

- a. The Permittee shall maintain a daily record of the following: [A.A.C. R18-2-306.A.3.c]
- (1) Amount of fuel oil used in the boilers.
 - (2) Sulfur content of fuel oil used in the boilers.
 - (3) Amount of natural gas used in the boilers.
 - (4) Number of simultaneous hours of boilers operation, breaking down to each type of fuel in use (i.e., natural gas, low sulfur oil, or high sulfur oil).
- b. The Permittee shall perform the following at the end of each calendar month: [A.A.C. R18-2-306.A.3.c]
- (1) Calculate and record the rolling 12-month total emissions of sulfur dioxide, using the equation prescribed in Condition II.B.3.b above, the type and amount of fuel fired, and sulfur content data for the fuel oil for the past 12 months.
 - (2) Calculate and record the rolling 12-month totals of number of simultaneous hours of boilers operation for the past 12 months.

- c. When burning “on-specification” used oil, the Permittee shall maintain, on site, copies of the fuel analysis supplied by the marketer for each batch of “on-specification” used oil, and shall be responsible for ensuring that the results of the analyses confirm that the contaminant levels specified in Condition I.F are not exceeded. [A.A.C. R18-2-306.A.3.c]
- d. The Permittee shall maintain relevant records under this subsection for the period of five years. All the records shall be kept on site available for review for the first two years after the initial date of logging after which the records may be moved to an off site location. [A.A.C. R18-2-306.A.4.b]
- e. The Permittee shall submit an annual report to the Director containing the following information: [A.A.C. R18-2-306.A.5]
 - (1) Rolling 12-month total emissions of sulfur dioxide during the year.
 - (2) Rolling 12-month total of number of simultaneous hours of boilers operation during the year.
 - (3) Summary of amount and sulfur content of fuel oil combusted in the boilers during the rolling 12-month periods in the year.
 - (4) Summary of amount of natural gas combusted in the boilers during the rolling 12-month periods in the year.

5. Testing Requirements

- a. During the permit term, the Permittee shall conduct or cause to be conducted on each boiler, two performance tests for sulfur dioxide, using EPA Reference Method 6 for sulfur dioxide concentration. One test shall be conducted with low sulfur oil and the other with high sulfur oil. [A.A.C.R18-2-312]
- b. Operation during periods of startup, shutdown, and malfunction shall not constitute representative condition of performance tests. [A.A.C.R18-2-312.C]

6. Permit Shield

Compliance with the terms of this Subsection II.B shall be deemed compliance with A.A.C. R18-2-724.E, F, G, and K. [A.A.C.R18-2-325]

Subsection II.C. Operational Limitations, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, is hereby removed from the permit.

Condition IV.A.3, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, is hereby amended with removal of Conditions IV.A.3.a and b to read as follows:

3. Fuel Limitations

The Permittee shall only burn in the internal combustion engines, diesel fuel that contains no more than 500 ppm (0.05%) of sulfur.

[A.A.C. R18-2-306.01.A and 331.A.3.a]

[This is a material permit condition]

Condition IV.A.4.b, Attachment “B” of Permit No. 1001585, as revised by Minor Permit Revision No. 31327, is hereby amended to read as follows:

4. Monitoring and Record Keeping

- b. The Permittee shall maintain records of fuel supplier certifications which verify that the sulfur content of the diesel fuel is less than the limit specified in Condition IV.A.3.

[A.A.C. R18-2-306.A.3.c, A.A.C. R 18-2-719.I]